

ABSTRACT

Hybrid lighting systems use light distributor tubes to distribute artificial light and natural sunlight through the same distributor tubes. Devices for gathering uncollimated light from conventional sources (such as electrically energized arcs or filaments housed in evacuated or gas filled glass envelopes) and directing the light into the ends of tubes designed to distribute such light. Devices for gathering and concentrating inherently collimated sunlight to be fed into the same light distributing tubes used by the artificial light. One preferred embodiment comprises a light gathering and concentrating system in the form of a pair of opposed parabolic reflectors, one which is preferably large, e.g. having a diameter of five feet, and the other much smaller, e.g. the size of the much smaller distribution tubes. This light gathering system is connected to the light distribution tubes through a pair 90° elbows which are rotatable in the X and Y axis in order to track the location of the sun in the sky. The two parabolic reflectors are positioned to share a common focal point so that the larger reflector will direct the sunlight through the focal point of the smaller reflector, which will, reflect the light as concentrated, collimated light. A central aperture in the larger reflector passes the concentrated beam on its way to the distribution tubes.